

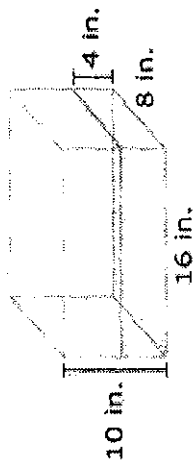
7.1 INTRODUCTION TO AREA AND VOLUME HOMEWORK

Part A

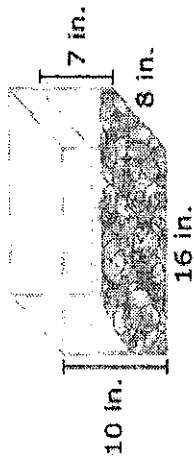
Moirra collected some stones at the beach. Now she wants to make a clear plastic container to display the stones. To plan the container, Moira decides that she must first find the volume of the stones.

Moirra has an aquarium that is shaped like a rectangular prism. It is 8 inches wide, 16 inches long, and 10 inches high. She plans to use the aquarium to find the volume of the stones.

First, Moira pours some water into the aquarium. She measures and finds that the water reaches to a height of 4 inches.



Then Moira puts the stones in the aquarium. She measures and finds that the water reaches to a new height of 7 inches.



Using this information, find the volume of the stones. Show your work.

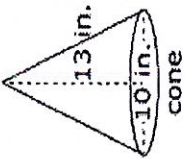
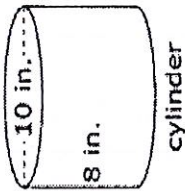
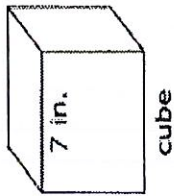
Enter your answer and show your work in the space provided.



- ▶ Math symbols
- ▶ Relations
- ▶ Geometry
- ▶ Groups
- ▶ Trigonometry
- ▶ Statistics
- ▶ Greek

Part B

Maira is considering three possible shapes for the container that will hold the stones. The shapes are shown.



Find the volume of each shape. Show your work.

Enter your answer and show your work in the space provided.



- ▶ Math symbols
- ▶ Relations
- ▶ Geometry
- ▶ Groups
- ▶ Trigonometry
- ▶ Statistics
- ▶ Greek

Part C

Based on Parts A and B, which of the three shapes would be Maira's best choice for a container for the stones? Explain your answer.

Enter your answer and your explanation in the space provided.



- ▶ Math symbols
- ▶ Relations
- ▶ Geometry
- ▶ Groups
- ▶ Trigonometry
- ▶ Statistics
- ▶ Greek

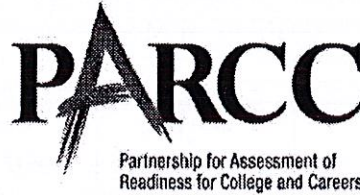


15. The table shows the approximate measurements of the Great Pyramid of Giza in Egypt and the Pyramid of Kukulcan in Mexico.

Pyramid	Height (meters)	Area of Base (square meters)
Great Pyramid of Giza	147	52,900
Pyramid of Kukulcan	30	3,025

Approximately what is the difference between the volume of the Great Pyramid of Giza and the volume of the Pyramid of Kukulcan?

- A. 1,945,000 cubic meters
- B. 2,562,000 cubic meters
- C. 5,835,000 cubic meters
- D. 7,686,000 cubic meters



High School Assessment Reference Sheet

1 inch = 2.54 centimeters	1 kilometer = 0.62 mile	1 cup = 8 fluid ounces
1 meter = 39.37 inches	1 pound = 16 ounces	1 pint = 2 cups
1 mile = 5280 feet	1 pound = 0.454 kilograms	1 quart = 2 pints
1 mile = 1760 yards	1 kilogram = 2.2 pounds	1 gallon = 4 quarts
1 mile = 1.609 kilometers	1 ton = 2000 pounds	1 gallon = 3.785 liters
		1 liter = 0.264 gallons
		1 liter = 1000 cubic centimeters

	Triangle	$A = \frac{1}{2}bh$	Pythagorean Theorem	$a^2 + b^2 = c^2$	
	Parallelogram	$A = bh$	Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	⊗
	Circle	$A = \pi r^2$	Arithmetic Sequence	$a_n = a_1 + (n - 1)d$	×
	Circle	$C = \pi d$ or $C = 2\pi r$	Geometric Sequence	$a_n = a_1 r^{n-1}$	×
★	General Prisms	$V = Bh$	Geometric Series	$S_n = \frac{a_1 - a_1 r^n}{1 - r}$ where $r \neq 1$	×
	Cylinder	$V = \pi r^2 h$	Radians	1 radian = $\frac{180}{\pi}$ degrees	×
	Sphere	$V = \frac{4}{3}\pi r^3$	Degrees	1 degree = $\frac{\pi}{180}$ radians	×
	Cone	$V = \frac{1}{3}\pi r^2 h$	Exponential Growth/Decay	$A = A_0 e^{k(t-t_0)} + B_0$	×
★	Pyramid	$V = \frac{1}{3}Bh$			

★ A capital "B" refers to the area of the base.